Central Semiconductor Corp.
145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824
www.centralsemi.com
https://www.centralsemi.com/process-change-notices

PCN #243
Initial Notification Date: December 8, 2022
Revised Notification Date: May, 25, 2023

Product / Process Change Notice

Devices affected:

Zener diode wafer process CPZ28X: wafers, bare die in chip form, and packaged devices.

Extent of change:

The CPZ28X wafer process has been discontinued and replaced with the CPZ58X and CPZ59X wafer processes, as indicated below and in figures 1-3. Additionally, the wafer diameter is changing from 5" to 6", and the metallization is also being enhanced.

New Wafer Process	Affected Items	Example
CPZ58X	*Items with nominal Zener voltages of 2.4V to 15V	Old: CPZ28X-BZX55C2V4-CM New: CPZ58X-BZX55C2V4-CM
CPZ59X	*Items with nominal Zener voltages of 16V to 75V	Old: CPZ28X-CMPZ5253B-CM New: CPZ59X-CMPZ5253B-CM

*The full excel list of all affected items and corresponding replacement wafer process types can be found on Central's website: https://www.centralsemi.com/process-change-notices.

Reason for change:

Replacement wafer processes provide improved and consistent yield, as well as an enhanced metallization.

Effect of change:

This change does not affect the fit, form, or function of any device. The new wafer processes meet all electrical specifications of the individual devices listed on the following page.

Qualification data:

Test	Condition	Failure rate
Temperature Cycling (TC)	T= -65°C to +150°C 1000 cycles. Dwell time = 15 min. **JESD22-A104**	0/77
High Temperature Reverse Bias (HTRB)	T=125°C, t=1000 hours, $V_R=V_Z$ **JESD22-A108**	0/77
Reverse Load Life (RLL)	Tj =125°C, t = 1000 hours. Pd=277mW. Iz=52.5mA **JESD22-A110**	0/77

Earliest effective date of change:

December 8, 2022

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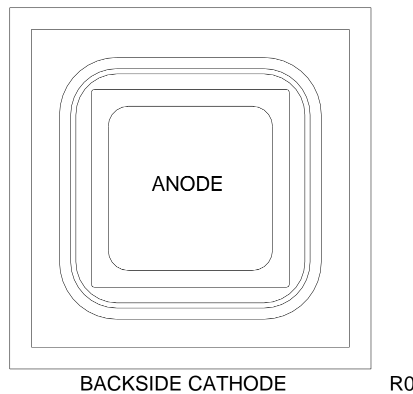
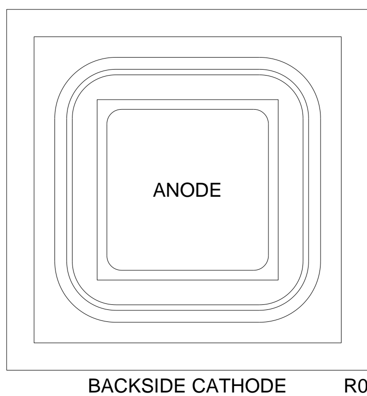
Sample availability:
Please contact your salesperson or manufacturer's representative for samples.

Figure 1. CPZ28X Chip Geometry (old)



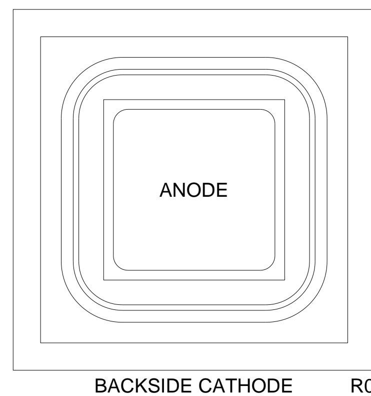
Die Size:	13 x 13 mils
Die Thickness:	5.5 mils
Bond Pad Area (Anode):	7 x 7 mils
Topside Metal:	Al (13,000Å)
Backside Metal:	Au (12,000Å)

Figure 2. CPZ58X Chip Geometry (new)



Die Size:	13 x 13 mils
Die Thickness:	5.5 mils
Bond Pad Area (Anode):	5.9 x 5.9 mils
Topside Metal:	AlSiCu (35,000Å)
Backside Metal:	AuAs (12,000Å)

Figure 3. CPZ59X Chip Geometry (new)



Die Size:	13 x 13 mils
Die Thickness:	5.5 mils
Bond Pad Area (Anode):	5.9 x 5.9 mils
Topside Metal:	Al (20,000Å)
Backside Metal:	AuAs (12,000Å)

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Part Numbers Affected:

CPZ28X-1N746A series
CPZ28X-1N957B series
CPZ28X-1N4099 series
CPZ28X-1N4614 series
CPZ28X-1N4678 series
CPZ28X-1N5221B series
CPZ28X-1N5518B series
CPZ28X-1N5985B series
CPZ28X-CMPZ5221B series
CPZ28X-BZX55C3V3 series
CPZ28X-BZX84C2V4 series
BZX84C2V4 series
CMPZ5221B series
CMDZ5221B series
CMSZ5221B series
CMHZ5221B series
CMPZDA2V4 series
CMSZDA2V4 series
CMDZ2V4 series
CMDZ1L8 series
CMOZ2V4 series
CMOZ1L8 series
CMXZ2V4TO series
CMPZ4614 series
CMHZ4614 series
CMPZ4678 series
CMHZ4678 series
CMPZDC15V

As per JEDEC standard JESD46, Customer Notification of Product/Process Changes by Solid-State Suppliers, a lack of acknowledgement of a PCN within thirty (30) days constitutes acceptance of the change.

The undersigned acknowledges and accepts Central Semiconductor's Product/Process Change Notification (PCN).

Company Name:	
Address:	
Printed Name:	
Title:	
Signature:	
Date:	

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